

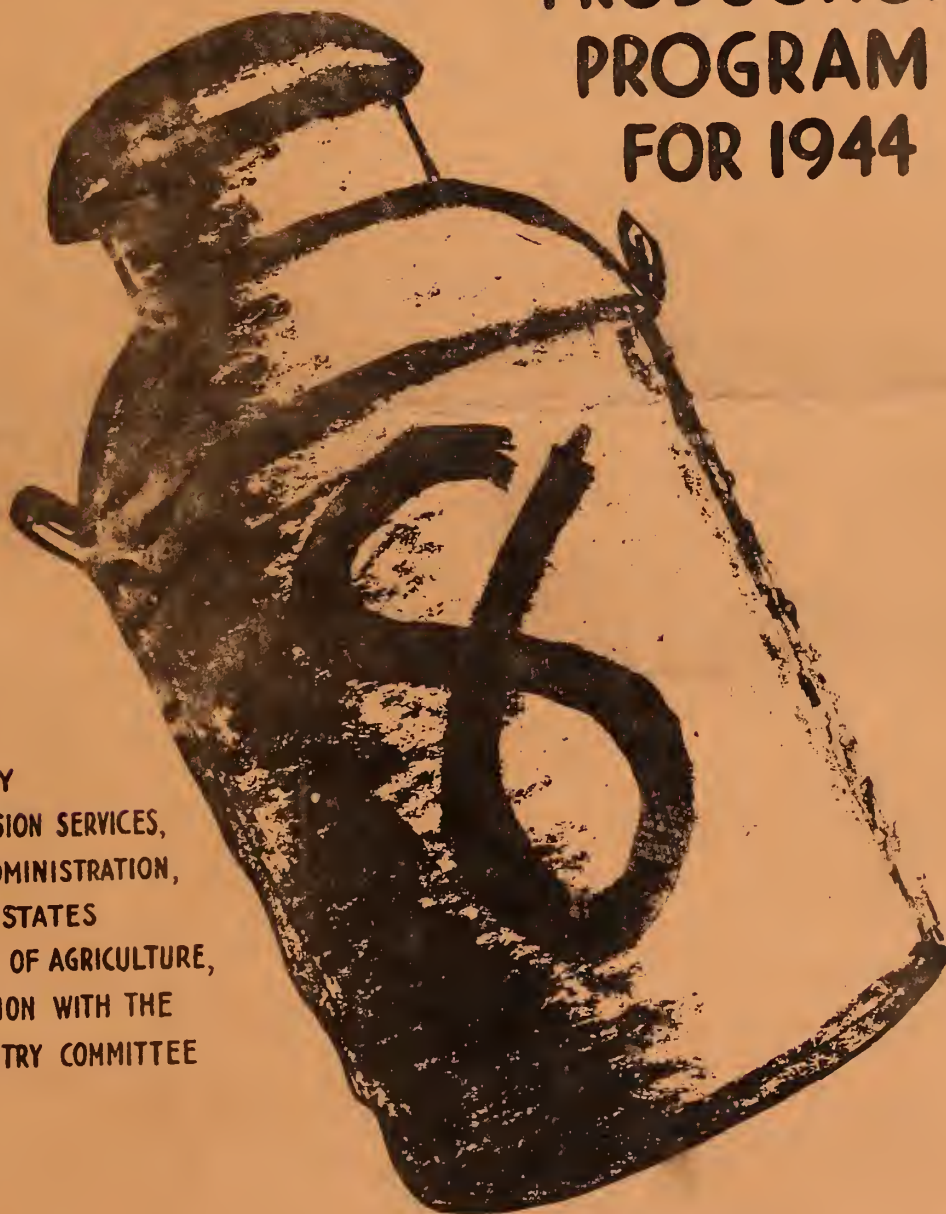
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8-POINT
MILK
PRODUCTION
PROGRAM
FOR 1944



PREPARED BY
STATE EXTENSION SERVICES,
WAR FOOD ADMINISTRATION,
AND UNITED STATES
DEPARTMENT OF AGRICULTURE,
IN COOPERATION WITH THE
DAIRY INDUSTRY COMMITTEE

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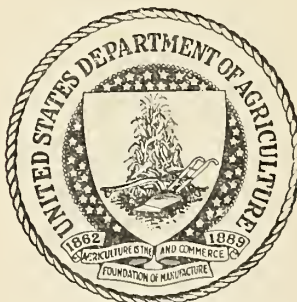
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8-POINT NATIONAL MILK-PRODUCTION PROGRAM FOR 1944

WHAT TO DO! AND WHY!

1. Grow more legume hay, pasturage, and grain.
2. Fertilize to increase quantity and quality of feed.
3. Feed to avoid summer milk slump.
4. Feed cows liberally during their dry period.
5. Keep as many cows as feed and labor permit.
6. Market more whole milk whenever possible.
7. Produce good-quality milk and avoid waste.
8. Breed for better herd replacements.

What to do!

1. Grow more legume hay, pasturage, and grain.

And why!

Concentrated feeds are expensive and difficult to obtain. Fortunately, the dairy cow is so constituted that she can use large amounts of roughage for milk production; the more she gets and the better the quality, the less concentrated feed she will need to make the ration complete.

Faced with the difficulty of obtaining high-protein concentrates, most dairy farmers will have to rely more heavily on home-grown grains and on good-quality roughage. With an abundance of good pasturage and good legume hay or good grass silage to supply much of the needed protein, farm-grown grains will balance the dairy ration.

More milk can be produced if the supply of hay, silage, and pasturage is enough to keep every cow in the herd fed up to the limit of her appetite every day in the year. The forage for winter feeding should contain plenty of legumes; the need for high-protein concentrates will then be reduced materially.

The quality of the roughage must be good enough so that cows will eat lots of it. Cutting hay before it matures and handling it carefully to save leaves increases its protein content and palatability. Much of the crop could be protected from weather damage better by putting it into the silo.

What to do!

2. Fertilize to increase quantity and quality of feed.

And why!

Much of the good pasture and hay land has been plowed up and put into grain crops. Many dairymen face a shortage of pasturage -- the best feed for milk production and usually the cheapest feed.

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To get as much pasturage in 1944 as will be needed, most dairymen will find it necessary to improve the pastures they still have and, to grow some annual crop for temporary or supplemental pasture and to graze meadows.

Very few of the dairy cows in this country have ever had all the good pasturage and good hay they could eat day in and day out; but if pastures and hay crops were improved sufficiently to supply the necessary quantity and quality of roughage for such feeding, the use of concentrates could be reduced by one-third or more without any loss in milk production.

Nothing excels well-rotted barnyard manure for improving pasture and hay yields. It should be used as far as it will go, and commercial fertilizers and lime should be used in the way advised by the local county agent.

Fertilization pays on pasture and hay crops as well as on grain and row crops. Supplies of fertilizers are generally available, and applications can be made with very little labor.

What to do!

3. Feed to avoid summer milk slump.

And why!

Every year National milk production drops in late summer and continues at a low level through the fall. The summer slump in milk flow is caused partly by flies and hot weather, but mostly by a lack of feed during the pasture season.

Many farmers depend too much on permanent pasture alone for summer feeding. Cows eat very much less grass when it is short and after it has formed seed. Moreover, it is physically impossible for a cow to graze her fill of short grass unless it is very thick, and after the grass has gone to seed it is unpalatable and also lower in nutritive value.

It is easy to be deceived by the appearance of a pasture. Usually it is not so good as it looks and many farmers make the mistake of waiting too long before they start to give the grazing cows supplemental feed. Loss of flesh and undue declines in milk production are reliable indications of a lack of feed; but by the time these conditions are noticeable, no amount of extra feed will restore the milk flow to where it would have been had the cows been fed enough from the start.

What to do!

4. Feed cows liberally during their dry period.

And why!

It is well known that a cow will give more milk if she is in good flesh at calving time than if she is thin.

To be in good condition at calving time, a cow should continue to get liberal quantities of good roughage after she goes dry; she can then be put in good flesh with a minimum amount of grain and other concentrates. In fact, if she has been well fed during her milking period, she will need very little concentrated feed during the dry period. But if she has not been well fed, it will be better to feed concentrates liberally, along with the good roughage, than to have her thin at calving time.

In general, cows will produce the most milk if they are allowed a dry period of about 2 months. Milking a cow right up to a week or two before calving time may reduce her production in the next lactation by as much as 15 percent. On the other hand, if she is turned dry more than 2 months before calving time, more milk will be lost in the current lactation period than will be gained in the next.

What to do!

5. Keep as many cows as feed and labor permit.

And why!

Since every milking cow should have all the forage she can eat at all times, in order to produce milk at the lowest cost, the size of the herd should be adjusted to the amount of forage that can be made available for feeding.

Some farms, especially those with only a few cows, are likely to be understocked, in which case an effort should be made to add enough good cows and heifers to turn the entire supply of forage into milk. Other farms may be overstocked with respect to the forage supply, in which case it is better to reduce the size of the herd by disposing of unprofitable cows than to reduce the amount of forage allowed each cow.

Every farmer should estimate carefully his probable supply of pasturage, hay, and silage, and decide on the basis of his previous experience whether the amount will be ample for the herd. There is no advantage in keeping more cows than can be provided with adequate amounts of these roughage feeds. Some cows would fail to get enough forage, and more concentrates would have to be fed to compensate for the shortage.

Where satisfactory markets for milk are available, many milk producers who normally keep only a few cows and who have enough will find it advantageous to increase the size of the herd enough to utilize all the forage they can produce.

What to do!

6. Market more whole milk whenever possible.

And why!

The wartime demand for all dairy products calls for delivery of the whole milk whenever possible. Moreover, once the whole milk has reached the

processing plant, the skim milk, buttermilk, and whey can be made to serve war-time needs to better advantage, because larger quantities can be converted into human foods.

In the past, many farmers have fed more skim milk to their calves, hogs, and poultry than was actually needed for satisfactory nutrition. Every effort should be made this year to find a market for whole milk and to reduce the amounts of both whole milk and skim milk fed to calves and other farm animals, by the use of milk-saving feeds.

In addition, wherever a market for the whole milk exists, it will generally pay better to sell the whole milk rather than only the cream or butter. A large part of the skim milk, buttermilk, and whey fed to farm animals is vitally needed for human food; and these products can be used much more efficiently if they are prepared for direct consumption as human food than if they are first turned into meat and eggs.

What to do!

7. Produce good-quality milk and avoid waste.

And why!

It has always been good business for dairy farmers to produce and market good-quality milk. The prosperity of every dairy farmer and the growth of a sound dairy industry are inseparably linked with good quality in all dairy products.

This year it is not only good business for the farmer to produce good-quality milk, it is an obligation to his country. Milk not usable at the dairy plant because it is not of the desirable quality deprives the Nation of vital food and reduces the income of the farmer.

Neither the farmer nor the Nation can afford to waste feed and labor and time in the production of unsalable milk. Only good-quality milk will make good-quality dairy products. The cheese, evaporated milk, and powdered milks for overseas shipment must be of good keeping quality to withstand severe conditions of transit and long storage.

Herds must be kept free from disease, not only to produce more milk but to produce milk that can be marketed. Sanitary methods of production and proper cooling of the milk are essential to avoid loss of milk and wasted effort.

What to do!

8. Breed for better herd replacements.

And why!

The Nation needs all the milk that American farmers can produce, and the demand for large quantities of dairy products will not end with 1944.

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This is no time to slacken their efforts to breed better cows to replace those that must eventually be discarded for one reason or another. Better cows will always be needed for more efficient production of milk. High-producing cows make the most profit under all conditions, and they may even be more essential in the post-war period than they are now.

No dairy herd is ever good enough, or as good as it can be made. Good proved sires offer the most promise for improvement, whether their service is available as individual herd sires or through a cooperative breeding association. The sons of such sires afford the next best opportunity.

By using the best bulls available at all times, dairy farmers will gradually increase the proportion of high-producing heifers born and raised in their herds.

8-Point National Milk-Production Program for 1944
Information Kit; Enclosure 2.

NEED FOR DAIRY PRODUCTS

During the past 2 years, the active demand for dairy products has soared higher and faster than for almost any other food. Civilians were willing and able to buy more milk, cream, butter, and ice cream than ever before, and the war needs for butter, cheese, evaporated milk, and milk powder have continued to rise each month.

During this period, and before, every effort was made to help farmers increase total over-all milk production. Prices were supported; assistance in obtaining labor, machinery and feed supplies was given; and an intensive campaign urging farmers to deliver more whole milk was conducted. Last year, this working partnership between Government and dairy farmers resulted in a milk output 10-billion pounds greater than in 1940. But even this record increase was insufficient to meet all calls for the nutritious, highly efficient dairy foods -- especially as the American public had been "sold" on these foods for years.

This year, in view of the certainty that demands on the milk supply would continue to increase and because of the military importance of keeping both the civilian and war fronts adequately supplied with milk and milk products, a technique was developed for dividing milk and dairy products among all groups having a claim on United States supplies, according to the relative urgency of the requirements of each group and the degree of our responsibility toward each of them.

Under this allocations procedure, total milk supplies and the supply of each of the manufactured dairy products is estimated for 12 months ahead. Each claimant group -- including United States civilians; United States armed forces, and military services, our allies and other friendly nations, United States Territories, the Red Cross, and liberated areas -- presents an estimate of its needs for the period, and these needs are then compared with estimated supplies. In the case of all claimants except United States armed forces, the amount of food allocated very often does not correspond with the amount requested, for estimated needs usually exceed estimated supplies. It should be stated, however, that the allocation to United States civilians includes their essential needs. The chart below shows the needs of the three main claimant groups for dairy products during the period October 1, 1943, through September 30, 1944. These needs are based not only on actual requirements, but on the total supply available. Actually, each group except possibly the United States Military, could use a great deal more of each dairy product than they have been allocated.

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TABLE I. - Milk and dairy products Allocations
 October 1, 1943, through September 30, 1944
 (In Millions of Pounds)

Commodity	Total allocable supply	U. S. civilians	U. S. Military <u>1</u> / and War Services	Other <u>2</u> / exports
*Fresh milk	45,330.0	43,755.0	1,575.0	
*Cream	1,285.0	1,268.4	16.6	
Butter	2,052.8	1,635.0	345.2	72.6
Cheese (American)	728.6	360.0	152.9	215.7
*Cottage cheese	140.0	128.5	11.5	
Cheese (other)	138.8	128.3	6.1	.4
Evaporated milk	3,044.6	1,305.0	1,280.8	458.8
Condensed milk	299.8	218.2	8.8	72.8
*Condensed skim milk	560.0	555.1	4.9	
*Ice cream				
fluid milk	1,505.0	1,142.7	359.9	2.4
fluid cream	280.0	212.8	66.8	.4
Dried whole milk	123.9	19.2	50.0	54.7
Dried skim milk (spray)	245.9	76.5	41.2	128.2
Dried skim milk (roller)	214.0	66.0	51.5	96.5
*Buttermilk and skim milk	7,725.0	7,720.1	4.9	
*Malted milk	25.0	20.4	1.8	2.8
*Dried whey	90.0	90.0		

* Not formally allocated.

1/ Includes contingency reserve wherever provided.

2/ Includes Lend-Lease shipments, shipments to other friendly nations, liberated areas, U. S. Territories, and Red Cross.

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1944 Production Goal

The demand for American milk and dairy products at home and abroad will continue to rise, but it may be expected that this demand, not fully satisfied in 1943, will again exceed supply in 1944. Total milk production in 1943 is estimated at a little more than 118 billion pounds. This will be about a billion pounds less than was produced in 1942, the record year of milk output. Bad weather, and war-shortened supplies of labor, feed, and machinery contributed to this decline, and some gains were lost because of the stabilization of prices. The fact that production during the first 7 months of this year was exactly equal to production during the first 7 months of 1942 would indicate, however, that the recent rather sharp decline is due more to short supplies of feed, especially high-protein feed, than to price relationships. Most farmers will mention feed supplies when asked, "What is your chief problem and barrier to increased output?" Labor shortages generally are mentioned as their next most important problem.

In spite of the many difficulties facing dairymen, however, they have told State War Board officials and local agricultural committees that an increase in milk production is attainable, under certain conditions, of course. After rounding up producers' own production estimates, a goal of 121.2 billion pounds of milk has been set for dairy farmers to work toward. This goal does not represent all the milk we could use, by any means. It represents merely the amount of milk the War Food Administration and farmers think can be attained under war conditions. The War Food Administration will continue to use every means possible to help and encourage farmers to reach the 1944 goals.

Diversion of Milk Into Various Dairy Products

Although it is true that Americans alone could use a great deal more of every type of dairy product now being produced, some dairy products are more important than others from the standpoint of (1) concentration of milk nutrients; (2) adaptability of transport under war shipping conditions; (3) historical and nutritive importance in the domestic diet. For this reason, various devices to "channel" milk into the war-important dairy products have been and are being employed.

A limitation on the amount of butterfat that can be used in cream is saving butterfat for use in butter.

A 35-percent cut in the quantity of milk solids that can be used in ice-cream manufacture is conserving milk for use in cheese, butter, evaporated milk, etc.

A special payment to cheese manufacturers enables them to compete for their fair share of milk under present retail ceiling prices.

The Food Distribution Administration is helping to finance and even to build milk powder plants in strategic areas to attract more whole milk to market instead of farm-separated cream.

The amount of fluid milk urban distributors may sell has been limited to the quantity sold in June, 1943, to prevent any further diversion of milk from manufacturing to fluid uses.

The quantity of cream which they may sell has been cut approximately 25 percent to save milk for butter, cheese, evaporated milk, and milk powder, and to help build up supplies of fluid milk in areas where production is low.

Other measures, or an intensification of the present measures, may have to be employed if the present diversion system is too loose.

Table 2 shows how milk has been used in pre-war years and during the present war years. Based on the goal of 121.2 billion pounds of milk, the desired diversion of milk during 1944 also is shown. Figures given are in terms of milk equivalent and also in terms of pounds of manufactured product.

TABLE 2 - Utilization of milk produced on farms

Million pounds						
Item	1935-39	1941	1942	1943	1944	
				1/	goal	2/
Milk production on farms	103,624	115,498	119,240	118,302	121,237	
Farm production utilized						
as-fluid milk and cream	41,320	44,074	46,607	50,599	51,200	
Butter, farm and creamery (milk equiv.)	43,992	46,044	43,006	41,856	42,000	
Cheese, all whole milk (milk equiv.)	6,701	9,552	11,150	9,785	10,900	
Evaporated and condensed milk (milk equiv.)	4,799	7,741	8,228	7,311	8,200	
Ice cream (excluding milk converted first into butter or other products (milk equiv.))	3,083	4,540	5,349	4,235	4,355	
Dried whole milk (milk equiv.)	149	347	484	991	1,000	
Other uses (milk equiv.)	3,580	3,200	4,416	3,525	3,582	
Products manufactured:						
Butter, farm and creamery	2,170	2,267	2,118	2,071	2,080	
Cheese, all whole milk varieties	663	961	1,108	974	1,080	
Evaporated and condensed milk	2,225	3,555	3,782	3,395	3,750	
Dried whole milk	19	46	64	130	130	

1/Expected.

2/The goal is for milk production on farms. The utilization is an estimate, assuming continuation of present limitations on sales of fluid milk and cream, and ice cream, and that evaporated milk and cheese production would reach 1942 levels with the rest of the milk used for butter.

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Distribution of Milk and Milk Products

War has at once increased the importance of obtaining equitable distribution of food and multiplied the difficulties in the way of achieving it.

Needs may be determined, production encouraged to meet those needs, allocations made, and yet the actual distribution pattern be far different from the strategic division decided upon. To implement the allocations procedure -- to put some strength into this food "budget" -- set-aside orders and rationing have been developed in the case of dairy products.

Set-aside orders help to assure that United States civilians and the various war claimants each will get their fair share of a given product. Thus, the set-aside orders on spray and roller process dried skim milk while reserving 75 percent of the production of each of these products for war uses also, in effect, assure 25 percent of the output for civilian uses.

The set-aside percentages on cheese and butter vary throughout the year, with the Government reserving a very high percentage of these products during the spring and summer months and little or none in the fall and winter. The chief reason for varying the set-aside in the case of these products is to get the best possible civilian distribution of the amounts allocated to them. Production of both cheese and butter is much higher during the period April through September than during the rest of the year. In June, for instance, butter production was almost double what it was in October. If the Government bought its butter requirements for each month out of that month's output, there would be a relatively high quantity available for civilians in June, but a relatively low civilian "remainder" -- an amount which might not be sufficient to meet even essential needs -- in October and November. With the amount to be set aside adjusted to production, however, the essential needs of civilians are being met not only on a yearly basis, but during each month. Whether production is high or low, the flow of butter to civilians is relatively even and adequate each month.

In the summer and early fall, many areas reported that butter supplies were extremely short, and this despite the fact that the scheduled amounts of butter were being made available to civilians each month. These butter shortage areas were the areas which depended for their supplies on imports from other regions. What happened was that under the 8-point ration value for butter and even the later 12-point value, most of the butter produced for civilians could be sold in or near the producing areas. With family incomes much higher than in pre-war years, and the ration point value fairly low, people in these areas could and did buy more butter than they normally purchased. Consequently, manufacturers had no need to ship their butter far away in order to find a market for it.

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With ration point values raised to 16 for a pound, butter is being distributed far more equitably as between producing and nonproducing areas.

All the other major uses of milk also are under some form of distribution control which aims to extend and divide fairly the total supply. Cheese and evaporated milk are rationed. The amount of milk solids that can be used in the production of frozen dairy foods for civilian consumption is limited. Milk cream and milk byproduct sales are controlled.

In fact, during 1943, the major outlines of a wartime dairy program have been filled in. A specific plan for stimulating efficient production and wise use of milk is being carried out. Some relatively small loopholes still remain, of course, and new problems in the execution of the wartime dairy program will continue to crop up. Their solution in 1944, as before, will depend on the all-out effort of farmers, manufacturers and distributors and their close cooperation with one another and the Government.

GENERAL SUMMARY OF THE FEED SITUATION

1. The National Situation.
2. The Foreign Situation.
3. The Regional Situation.
4. Individual Crop-Supply Situations.
5. Feed Consumption and Utilization.

1. The national situation.

Feed Concentrates

The total supply of the principal feed concentrates for the 1943-44 crop year is expected to be 169 million tons, 2 percent below the supply for the preceding year, but 24 percent above the 136-million-ton 1937-41 average. The supply includes the four principal feed grains (corn, oats, barley, and grain sorghums), wheat and rye for feed, byproduct millfeeds, and all high-protein concentrates. Data for most feeds are computed on an October year, but in the case of oats, barley, wheat millfeeds, and wheat and rye for feed the supply is estimated for the crop year which begins generally in July. An exceptionally large quantity of wheat was fed in July-September 1943, leaving only slightly more available for feed in the 9 months beginning October 1943 than in the corresponding period of 1942-43. (On the basis of a feeding year beginning October 1, 1943, the amount of wheat fed would be 12,000,000 tons, instead of 15,300,000 tons shown in Table 1, and similarly the total supply of principal feed concentrates would be reduced from 169 to 165 million tons.) Although supplies of feed concentrates are indicated to be only slightly smaller than last season, about 10 percent more grain-consuming animal units are expected to be on farms next January 1 than last. The supply of feed concentrates per grain-consuming animal unit would be approximately 11 percent smaller this season than last and about 7 percent smaller than the 5-year average. By drawing down stocks during the year, however, disappearance of feed concentrates per animal unit may be slightly above average and about equal to that in the 1940-41 season.

Feed Grains and Hay

The total supply of feed grains for the 1943-44 crop year, including wheat and rye for feed, based on prospects as of December 1, will be about 150 million tons. This estimated supply is 3 million tons smaller than the 1942-43 record high, but 29 million tons greater than the 1937-41 average. These supply estimates include 380 million bushels of domestic wheat which could be made available for feed in the year beginning July 1943, without bringing the carry-over next July 1 below 250 million bushels. They also include 40 million bushels of rye, the expected imports of oats, barley, and feed wheat from Canada, and the domestic supply of the four principal feed grains. The stocks of hay on May 1 this year were 2 million tons greater than last year. The indicated production of hay for 1943 is 100 million tons, as compared with last year's production of 105 million tons.

Table 1.- Feed concentrates: Supplies and disappearance, number of grain-consuming animal units, and supply and disappearance per animal unit in the United States, 1926-43

Market- ing year 1/	Corn : 2/	Oats : 2/	Barley : 2/	Grain: sor- ghums : 3/	Wheat fed 4/	Rye 4/	Mill-: High- : feed : protein : by- : concen- : prod- : trates : : ucts : 6/	Grain- : consuming : : animal : : units : : 7/	Supply : : per : : animal : : unit : : 8/	Total : Disap- : domes- : : tic : : disap- : : pear- : : animal : : unit : : 9/	
: 1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	1,000 : tons	
1296	79,187	22,704	4,249	2,037	1,028	188	8,169	7,060	124,622	135,457	0.92 114,435 0.84
1927	79,338	20,235	5,896	2,334	1,335	190	7,910	6,591	123,829	140,453	.88 117,295 .84
1928	77,270	22,888	8,133	2,212	1,697	196	7,824	6,959	127,179	137,038	.93 116,548 .85
1929	74,556	20,812	7,332	1,399	1,763	308	7,496	7,091	120,757	135,806	.89 112,937 .83
1930	62,143	22,909	7,681	1,052	5,391	518	7,180	6,866	113,740	134,944	.84 105,243 .78
1931	76,835	20,816	5,283	2,014	5,709	532	6,220	6,779	124,188	139,469	.89 113,467 .81
1932	89,621	22,515	7,411	1,851	4,293	479	6,006	6,942	139,118	144,491	.96 123,006 .85
1933	77,956	15,530	4,394	1,523	3,078	238	5,684	6,777	115,180	143,168	.80 103,029 .72
1934	50,026	10,794	3,670	538	3,408	280	6,024	6,688	81,428	120,518	.68 79,191 .66
1935	66,196	20,625	7,449	1,613	2,973	454	6,287	7,528	113,125	123,032	.92 102,285 .83
1936	47,084	17,172	5,373	848	3,378	384	6,668	7,728	38,635	122,401	.72 88,001 .72
1937	75,842	20,282	5,938	1,959	3,894	526	6,483	8,111	123,035	120,962	1.02 104,185 .86
1938	81,485	20,769	7,041	1,882	4,593	580	6,960	8,139	131,449	127,003	1.04 109,210 .86
1939	88,610	18,460	8,057	1,491	3,243	504	6,821	8,427	135,613	138,491	.98 111,384 .80
1940	88,198	22,300	8,813	2,329	3,423	476	6,844	9,657	142,040	133,449	1.06 118,343 .89
1941	92,981	22,464	10,358	3,130	3,468	577	6,985	9,968	149,931	143,077	1.05 130,307 .91
1942 g/	101,470	2/25,605	2/12,675	2,990	9,540	764	7,728	11,173	171,945	158,928	1.08 154,905 .97
1943 10/	96,585	2/23,009	2/10,709	2,889	15,300	1,120	8,014	10,998	168,624	175,000	.96

1/ Corn and other high-protein feeds, year beginning October; oats, wheat, and rye feed, and wheat millfeeds, year beginning July; barley, year beginning August 1926-33, year beginning June 1934-43. 2/ Production plus carry-over. 3/ Production. 4/ Fed on farms of wheat growers plus Government feed wheat. 5/ Production and net imports of wheat millfeeds plus production of screenings, beet and molasses pulp, and rice millfeeds. 6/ Converted to oilmeal equivalent as follows: Cottonseed, soybean, linseed, and peanut oilcake and meal, 1; tankage and meat scraps, fish meal, and skim milk and products, 1.5; gluten feed, distillers' dried grains, brewers' dried grains, and copra meal, 0.7. 7/ Including poultry. 8/ Revised. 9/ Includes imports. 10/ Preliminary.

Stocks of grain carried over next fall--1944--will probably be reduced to the lowest level since the drought years 1934 and 1936, despite prospective imports of wheat, oats, and barley, mostly from Canada, equivalent to about 150 million bushels of corn.

Prices of oats and barley advanced approximately 14 cents a bushel from mid-August to the end of November, reflecting the strong demand for all feeds and the difficulty of obtaining corn for shipment. The price of corn has been under ceiling since the beginning of 1943, whereas oats and barley were unrestricted until December 6. Until recently prices of these grains have been below parity.

High-Protein Feeds

Production and consumption for livestock feed of cottonseed, soybean, linseed, and peanut cake and meal were at high levels in 1942-43. For the year ended September 30 production of these four feeds totaled 6.1 million tons as compared with 4.6 million tons in 1941-42 and an average for 1935-39 of 3.5 million tons. Disappearance for livestock feed in 1942-43 amounted to approximately 5.9 million tons as compared with 4.5 million tons a year earlier and a 5-year average of 3.2 million tons. In 1943-44, supplies of oilcake and meal available for feeding are expected to be moderately larger than in 1942-43.

Production of tankage and meat scraps is expected to be somewhat larger in 1943-44 than in 1942-43, reflecting increasing livestock slaughter. Fish meal production may also be somewhat larger. On the other hand, the quantity of skim milk available for livestock feeding will probably be reduced.

Supplies of high-protein concentrates are expected to be inadequate to meet all demands throughout the current crop year. Supplies are slightly smaller in total and considerably smaller in relation to the number of animals to be fed than they were a year ago.

1944 Goals

The 1944 suggested acreages of feed grains and hay are based on the premise that direct food crops must have first choice of available cropland during the coming year. However, total acreage of feed grains under the 1944 goals would be nearly the same as the 175 million acres planted in 1943. Corn would be increased from 96.8 to 100.2 million acres; oats would be reduced from 42.7 to 39.5, barley from 17.9 to 17.4, and all sorghums for grain from 17.2 to 16.7. Harvested acreage of tame hay would be increased 4 percent from 60.5 to 62.8 million acres. Acreage for cotton and oilcrops, which yield high-protein cake and meal, would go up 7 percent, with the largest increase indicated for soybeans. Soybeans harvested for beans would be increased 19 percent, from 11.5 million acres in 1943 to 13.6 million acres in 1944. The acreage of peanuts grown alone would be increased 21 percent, from 5.0 million to 6.0 million. Cotton in cultivation July 1 would increase slightly, from 22.0 to 22.3 million acres. But the acreage of flaxseed planted would decline from 6.3 million in 1943 to 5.9 million in 1944.

Achievement of the acreage goals with normal crop yields would result in a somewhat lower production of feed grains in 1944 than in 1943 when yields were above average. About as much hay would be produced as in the current year, while output of oilcake and meal would be increased.

Summary of Recent Action Relating to
Distribution of Feed Supplies for Dairy Cattle

1. Beginning October 4, the Commodity Credit Corporation, in making sales to feed mixers, will limit the use of feed wheat to mixed feeds for dairy cows and laying hens.

2. Commodity Credit Corporation Orders 6 and 7, effective September 17, restrict the purchase and use of soybeans and cottonseed. Soybeans may not be crushed except under contract with Commodity Credit Corporation. To prevent speculative holding, purchases of 1943-crop soybeans beyond requirements for the period ending October 10, 1944, are prohibited, and, with some exceptions, country shippers are prohibited from holding soybeans in excess of contract requirements after March 31. Cottonseed inventories held by ginners and other handlers are limited, and persons other than manufacturers, seed dealers, or ginners are prohibited from purchasing 1943-crop cottonseed except for planting. To prevent wastage of vegetable oil, the purchase of soybeans and cottonseed in whole or ground form for use as feed or fertilizer also is prohibited.

3. Food Production Order 9, Revised, effective October 1, continued the inventory restrictions on oilseed meal that had been in effect under FPO-9 and FPO-9.1, and prohibits the sale and delivery of soybean flour, grits, and similar food products for use as feed. It also restricts deliveries of cottonseed meal and cake in less than carload lots under certain conditions, and authorizes the Director of Food Production to restrict shipments of oilseed meal into certain areas and to direct the distribution of approximately 20 percent of each processor's production during any 30-day period.

4. In the tentative statement of policy issued by the War Food Administration in October, feed dealers were urged to use their mixed feed ingredients to manufacture the kinds and quantities of mixed feeds designed to bring about the desired adjustments in livestock production, which would call for maintenance of milk output at a high level, but would result in some reduction in hogs, cattle feeding, and commercial broiler production. Feed dealers were also urged to distribute their feed supplies--including feed grains, protein supplements, and mixed feeds--in such a way as to achieve this objective. Where it has been necessary for the trade informally to ration feeds, the rationing has been done largely on a historical basis. As a result, producers of livestock and poultry for which some curtailment of production is desired, have been obtaining relatively as much feed as the dairy producers whose production we want to maintain or even to increase. The War Food Administration has proposed that in order to balance our livestock production with our available feed supplies, so far as dairy cattle is concerned, including replacement stocks, sufficient feed be made available to maintain milk production at not less than the 1942-43 level.

5. The State War Boards and the War Food Administration have agreed on a 1944 milk production goal of 121 billion pounds. The goals contemplate an over-all increase in cow numbers of about 2 percent. To attain the goals, the following conditions are necessary: Higher dairy returns to meet higher feed costs, distribution of feed supplies according to the needs of dairy farmers, and highest practicable yields of hay and pasture crops in 1944.

6. War Food Administrator Marvin Jones announced on November 24 a proposed production order, amending FPO-9, to be effective January 1, 1944, designed to bring about a better distribution of protein meal among livestock and poultry feeders and among mixed feed manufacturers.

The Food Production Administration has issued a set-aside order, under existing regulations, which will be effective on meal processed during January. Meanwhile, processors will be given an opportunity to make meal available to the FPA during the month of December to meet emergency situations. Meal made available in this manner will be credited to the quantity to be set aside during January.

A public hearing was held in Washington on Thursday, December 2, on the proposed order and to consider problems raised by the contemplated set-aside order.

2. The Foreign Situation.

Canada and Argentina have been the principal sources of imported feeds in recent years. Total imports of oats, barley, and wheat in 1943-44 may be equivalent to about 180 million bushels of corn. The principal limiting factor will be the scarcity of shipping space.

During the July-June year 1942-43, about 80 million bushels of oats and barley were imported from Canada to supplement domestic feed supplies. In 1943-44, total barley imports from all sources, principally Canada, are expected to reach 25 million bushels. Since September, Canada has stopped permits for further exports of barley, which will probably limit the supplemental barley supply from Canada. Imports of oats from Canada are expected to total 50 million bushels. Total imports of wheat from all sources (Canada, Argentina, and Australia) are expected to exceed 100 million bushels in the 1943-44 fiscal year.

The failure of the 1943 corn crop in Argentina reduced the Argentina corn supply to very much less than one-half of average, and the bulk of the corn supplies in Argentina will be needed to meet local requirements for feed and fuel until the 1944 crop is harvested next spring, at which time supplies are expected to be much greater because of the considerable increase in acreage. Wheat supplies in Argentina are 38 percent above the 1937-41 average, and the largest in recent years.

3. The Regional Situation

North Atlantic States

Locally produced supplies of feed grains in the North Atlantic States are indicated to be about 22 percent smaller in 1943 than in 1942, but supplies of hay are expected to be about 8 percent larger. In recent years, farmers have grown about one-half of the grain used for livestock feeding. In 1942-43 only about 40 percent of the grain fed was produced locally, with feed wheat becoming an important source of feed in the last half of the 1942-43 feeding season. During 1943-44 there will be slightly less Government wheat available for sale, but this will be at least partly offset by imports of wheat from Canada, a large part of which will go into this area. Corn movement into this area was very heavy during October-March of 1942-43, and considerably less corn may be shipped in this period of 1943-44. Altogether, supplies of feed concentrates in the North Atlantic area may be 5 to 10 percent smaller than in 1942-43, depending on the volume of wheat imported and the movement of corn from the Corn Belt.

In order to mobilize the resources of the trade in helping to meet the needs of the Northeast, a Lower Lakes Grain Committee, consisting of representatives of feed and grain mixers, dealers and others, has been in operation for several months. This Committee works closely with representatives of grain suppliers, through the Upper Lakes Grain Committee, in arranging for the shipment of the largest possible quantity of feed grains into the Northeast.

Most of the imports of cottonseed meal, flaxseed, and animal proteins from South America in recent months have been coming into northeast ports. Proteins for dairy feed in the Northeast are now indicated to be in reasonably satisfactory supply, although there is still need for additional quantities of soybean meal for poultry feeds.

If the estimates of the Lower Lakes Grain Committee on feed requirements are approximately correct, shipments of grain by rail during the next 6 months will need to be at the rate of about 14 million bushels a month. The Northeast is vitally interested in knowing what the chances are of moving this quantity of feed regularly by rail and almost as much interested in knowing how much of it will be corn.

Table 2. - Livestock production in the North Atlantic area, 1940-43 1/

Kind	Production units	Calendar year			
		1940	1941	1942	1943 <u>2/</u>
Milk <u>3/</u>	Mil. lb.	17,361	17,917	18,449	17,505
Farm eggs <u>3/</u>	1,000 doz.	519,083	539,750	585,750	634,600
Farm chickens <u>3/</u> <u>4/</u>	1,000 lb.	289,971	308,956	358,697	435,300
Farm broilers <u>3/</u>	1,000 head	16,730	20,045	24,430	31,600
Farm turkeys <u>3/</u>	1,000 head	1,933	2,062	2,229	2,250
Hogs <u>5/</u>	1,000 lb.	367,765	329,475	389,365	550,000
Cattle and calves <u>5/</u>	1,000 lb.	837,315	828,180	859,725	1,000,000
Sheep and lambs	No. Jan. 1 in:				
	1,000 head	799	809	812	833
Work stock	No. Jan. 1 in:				
	1,000 head	783	767	740	719
Total concentrate- consuming live- stock units <u>6/</u>	1,000 units	11,558	11,750	12,558	13,634

1/ New England, New York, New Jersey, and Pennsylvania.

2/ Preliminary estimates.

3/ Total production.

4/ Live weight.

5/ Net production, live weight.

6/ Quantities of each of the livestock products indicated multiplied by the following factors: Milk, .236; eggs, .0054; chickens, .003586; broilers, .0086; turkeys, .051; hogs, .00318; cattle and calves, .00157; sheep and lambs, .027; and work stock, 1.11.

Table 3. - Livestock production in the North Atlantic area by classes as a percentage of the total, 1940-43

Livestock or product	Proportion of livestock units by classes			
	1940	1941	1942	1943 <u>1/</u>
	Percent	Percent	Percent	Percent
Milk	35.4	36.0	34.7	30.3
Eggs	24.3	24.8	25.2	25.1
Chickens	9.0	9.4	10.2	11.4
Broilers	1.2	1.5	1.7	2.0
Turkeys9	.9	.9	.8
Hogs	10.1	8.9	9.9	12.8
Cattle and calves	11.4	11.1	10.7	11.5
Sheep2	.2	.2	.2
Horses and mules	7.5	7.2	6.5	5.9
Total	100.0	100.0	100.0	100.0

1/ Preliminary.

Southern States

The drought in the Southern States has materially reduced both feed grain and hay supplies in this area from the large supplies available in 1942. In the south central section locally produced feed-grain supplies are estimated to be about 5 percent smaller than in 1942-43, and local hay supplies about 10 percent smaller. A tight feed situation is developing in the south central and southern Great Plains area, and feed supplies may be smaller in relation to livestock in this area than in any other section during 1943-44. Supplies of feed grains and hay have declined relatively more from last season in Arkansas and Oklahoma than in any other region. In the south Atlantic area feed-grain supplies are only slightly smaller than in 1942-43, and hay supplies are 2 percent larger.

Recently we bought 50-thousand tons of wheat and 12-thousand tons of barley in Argentina and hope to be able to get ships for additional quantities regularly during the next few months. It would be desirable to have this grain come into southern ports so that the minimum amount of transportation would be required in moving it into the South Central States, where the normal deficiency of grain supplies has been made more serious by a very prolonged drought. These shipments would ease the requirements for the transportation of grain from surplus producing area to the South and conceivably make more transportation available to other feed-deficit areas.

West

Production of oats and barley was again much above average in the Western States, but below the large 1942 production. Wheat made up about one-third of the grain fed in this area in 1942-43, however, and total feed supplies will depend on the quantity of wheat that can be released for feed in this area. Locally produced supplies of the four feed grains are estimated to be 5 percent below the 1942-43 supply, but about 51 percent above the 1937-41 average. Wheat feeding is expected to be somewhat smaller in this area from October 1943 through June 1944 than a year earlier. This will mean a lower rate of feed per animal unit in this section, although livestock numbers have increased relatively less in the West than for the country as a whole. Hay supplies are estimated to be slightly larger than last year, and 7 percent above the 1937-41 average.

Parts of the west coast are usually feed-deficit areas. Prior to the outbreak of the present World War, the west coast had depended on copra meal for a large part of its protein feed. With the shutting off of imports, they have to depend on sharing the available high-protein feeds with all others.

Corn Belt

The combined supply of the four principal feed grains in the Corn Belt States is 7 percent below the record supply of 1942-43, but considerably above the 1937-41 average. Deterioration of the corn crop in Kansas and Nebraska during August reduced the prospective feed supply in these two States to much below the 1942-43 supply. In the eastern and central Corn Belt, supplies of feed are smaller than last year, but by using-up reserve stocks of corn and

other grains, the quantity fed may be about as large as, or a little larger than, in 1942-43. With livestock numbers 10 to 12 percent greater in the Corn Belt than in 1942-43, less feed will be available per animal, and probably less grain will be shipped out during the first 6 months of the marketing year. Hay supplies will be above average in the Corn Belt, and adequate for the livestock on farms, although supplies per animal will be somewhat smaller than in 1942, especially in the western Corn Belt, where 1942 supplies were unusually large.

4. Individual Crop Supply Situations.

Four Principal Feed Grains-- Corn, Oats, Barley, and Grain Sorghums

The carry-over of corn, oats, and barley was increased in the 1937-40 crop years, when production was greater than requirements. During the past 2 years, carry-over has been reduced as requirements have mounted with an increasing livestock population.

Total stocks of corn, oats, and barley at the beginning of the 1943 marketing year amounted to nearly 17 million tons, compared with nearly 19 million tons in 1942 and over 23 million tons in 1941. Although less than in any of the past 4 years, the carry-in of these feeds this season was considerably above the long-time average. In the 10 years 1928-37, stocks at the beginning of the season averaged only 8.4 million tons. If stocks were reduced to about this level at the end of the 1943-44 season, consumption of the principal feed grains would be 8 to 9 million tons greater than production. Approximately 2 million tons of corn, oats, and barley were drawn from stocks in 1942-43. The net gain from this source this season compared with last, therefore, would be 6 to 7 million tons.

Present indications point to a total output of feed grains this year of about 115 million tons, only 8 million tons under the record output of last year. The December 1 estimate of corn production--3,076 million bushels--was 10 million bushels below the estimate of November 1 but only 55 million bushels under the all-time record 1942 crop. Prospects for grain sorghums declined by about 4 million bushels from November 1 to December 1, when the crop was estimated at 103 million bushels, 4 million bushels below the 1942 crop. The oats crop is indicated on December 1 to be about 206, and barley about 107 million bushels under the large 1942 crop.

Government sales of corn for feed in November amounted to less than half a million bushels. Approximately 1.3 million bushels of corn were held by Commodity Credit Corporation on December 1.

Disappearance of corn, oats, barley, and grain sorghums for all purposes also was at a high level in the period October-September 1942-43, totaling about 126 million tons compared with 109 million tons a year earlier and an average for the 5 years 1935-39 of 85 million tons.

Wheat and Rye for Feed

More than 6 million tons of wheat and rye were fed in the July-September quarter this year, compared with less than 4 million tons fed in the preceding quarter, and 2 million tons in the July-September quarter of 1942. For the year ended September 30, nearly 15 million tons of wheat and rye were fed, compared with 6 million tons in 1941-42, and 4 million tons as the 1935-39 average.

As a partial offset to the tight feed-grain situation, more wheat will be fed in 1943-44 than in 1942-43. It is estimated that for the year beginning July about 480 million bushels of wheat will be fed to livestock, including Commodity Credit Corporation sales of domestic wheat, wheat fed on farms where grown, and small quantities of wheat purchased by feeders on the open market. This compares with about 318 million bushels last season. Consumption of wheat for feed was unusually large in the July-September quarter this year (an estimated 195 million bushels), leaving about 285 million bushels in the 9 months October-June. This would provide an average for the October-June period of about 95 million bushels per quarter, compared with an average of 79 million bushels per quarter in the 1942-43 crop year. Most of the domestic wheat remaining will probably be fed in the October-December quarter, and, to a lesser extent, the January-March quarter, leaving comparatively little for feed in the April-June quarter.

November 1 stocks of wheat owned by Commodity Credit Corporation totaled 99 million bushels, 16 million bushels less than a month earlier, and at the lowest level in the past 2 years. Of this quantity, less than 50 million bushels may be available for sale as feed. However, additional supplies of wheat for feed will be made available through imports from Canada and Argentina--mostly Canada.

Government sales of wheat for feed declined moderately in October, and preliminary reports indicate a further decline in November. Approximately 34 million bushels in September, and 58 million bushels last May, the peak month to date. For the first 10 months of 1943, Government sales averaged slightly more than 36 million bushels monthly. For 1942 as a whole, monthly sales averaged about 8 million bushels. More than 450 million bushels of wheat have been sold for feed from Government holdings since the beginning of 1942.

Hay

The indicated production of hay for 1943 on December 1 was 100 million tons, 8 percent greater than the 1937-41 average, and larger than for any recent year, with the exception of the 105-million-ton record crop harvested in 1942. Including the larger than normal carry-over, the supply of hay in prospect for the 1943-44 feeding season is 113 million tons, 3 percent smaller than in 1942-43. Allowing for the increase in livestock numbers, hay supplies per hay-consuming animal unit are 5 percent smaller than last year, and 1 percent larger than the 1937-41 average.

The designated drought area in the East where hay may be purchased by dairy farmers at reduced prices has been enlarged. The hay is being supplied to local dealers by the Southern States Cooperative Association under agreement with Commodity Credit Corporation to pay the Association the difference between the Association cost and local selling prices.

Byproduct Millfeeds (wheat and rice millfeeds,
screenings, beet pulp).

The supply of wheat millfeeds (domestic production plus imports) for 1943-44 will probably be a little larger than the 1942-43 supply of 5,113,000 tons. The production of wheat flour for domestic use and export will exceed 1942-43 production by about 5 percent. In addition to this, 50 to 75 million bushels of wheat will be used for making wheat granular flour for alcohol, which is somewhat larger than the quantity used in 1942-43. Hence, millfeed supplies may approximate 5.5 million tons, 8 percent larger than last year.

The supply of rice millfeeds may be slightly larger, screenings about the same, and there will probably be some reduction in beet pulp, as a result of the smaller crop of sugar beets.

High-Protein Concentrates (4 oil meals, gluten feed,
brewers' and distillers' dried grains,
copra meal, animal proteins).

Supplies of high-protein feeds, including oilcake and meal, animal-protein feeds, gluten feed, and brewers' and distillers' dried grains, are estimated at 10.9 million tons (oilmeal equivalent) as compared with a supply of 11.2 million tons last season and a 5-year average of 8.9 million tons.

High-protein concentrate supplies are expected to continue tight throughout the current crop year. Although only slightly smaller in total, supplies are smaller in relation to number of animals to be fed than they were a year ago.

Production of oilcake and meal in 1943-44 is expected to be larger than in 1942-43, but stocks carried over will be smaller and the equivalent of 500,000 to 600,000 tons of soybean meal is scheduled to be used for food, as compared with about 200,000 tons in 1942-43. Cottonseed cake and meal production may be somewhat smaller next year because of the prospective smaller cottonseed crop. The total supply of oilmeal available for feed is expected to be slightly larger than in 1942-43.

Production and consumption for livestock feed of cottonseed, soybeans, linseed, and peanut cake and meal, were at high levels in 1942-43. For the year ended September 30, production of these four feeds totaled 6.1 million tons, as compared with 4.6 million tons in 1941-42 and an average for 1935-39 of 3.5 million tons. Disappearance of livestock feed in 1942-43 amounted to approximately 5.9 million tons, as compared with 4.5 million tons a year earlier and a 5-year average of 3.2 million tons.

Total production of oilcake and meal was distributed somewhat differently by quarter in 1942-43 than in 1935-39. In the 1935-39 period output was distributed by quarters, beginning October, as follows: 38 percent, 29 percent, 15 percent, and 18 percent. In 1942-43, production in the October-December quarter represented only 29 percent of the total, and in July-September, 30 percent of the total. The tendency for production to flatten out over the year was due to the large increase in soybean crushings, necessitating near-capacity operation of soybean plants throughout the crop year.

The total quantity of animal proteins available in the feed-marketing year beginning October 1943 may be about as large as in 1942-43. An increase in the production of tankage and meat scraps is in prospect because of the increased slaughter of livestock, and a somewhat larger production of fish meal. However, less skim milk and milk products will be available for feeding, which may about offset the increase in tankage and meat-scrap production. Animal protein supplies in 1943-44 will again be much smaller than the requirements of livestock, unless a reduction in numbers of livestock should occur through a marked increase in slaughter. In that event, the large production of tankage and meat scraps together with a smaller number of livestock would result in larger supplies of these feeds per animal and some loosening of the animal-protein situation.

Supplies of other protein feeds may be nearly 125,000 tons larger next year than this, principally because of the increase in production of distillers' dried grains. In 1943-44, new recovery equipment to be installed in distilleries and the construction of new distilleries are expected to increase the production of distillers' dried grains by about one-third. Production of corn gluten feed and meal may be about the same in 1943-44 as during 1942-43, depending on the quantity of corn available to these industries. If these industries have sufficient corn to run at capacity for the entire year, production may be slightly larger than this year, when floods and a shortage of market supplies of corn interfered with wet processing of corn during the spring and summer months. Production of brewers' dried grains may be slightly smaller because of the smaller prospective production of malt liquors.

5. Feed Consumption and Utilization.

Table 4, showing feed consumption as it related to livestock production, indicates that feed supplies may not now be utilized as efficiently as possible. For example, in the north Atlantic region 0.90 tons of feed were consumed per livestock production unit in 1942-43, as compared with 0.77 tons in 1941-42. Part of the increase in consumption in 1942-43, however may be explained by an increase in nonfarm production of livestock products, data for which are not reported.

Table 4. - Estimated quantities of feed concentrates consumed by livestock in relation to livestock production, by areas, 1/

Region	Livestock production units 2/		Feed consumed per livestock production unit	
	1942	1943	1941-42	1942-43
	Calendar year			
	Million units	Million units	Tons	Tons
North Atlantic	12.6	13.6	.77	.90
Ohio, Indiana, and Michigan	20.8	23.3	.75	.77
Illinois, Wisconsin, Minnesota, Iowa, and Missouri	62.9	73.6	.71	.74
North Dakota, South Dakota: Nebraska, Kansas	20.8	26.2	.63	.77
South Atlantic	12.4	14.8	.67	.63
South central	29.2	35.3	.61	.57
Western	16.5	18.5	.39	.51
Total United States	175.2	205.3	.66	.70

1/ Four feed grains, wheat, rye, oilcake and meal, millfeeds, corn gluten feed, brewers' and distillers' dried grains, dried beet pulp, and estimated production of hominy feed and oat feed available for livestock feeding during the year beginning October 1.

2/ Production of livestock and livestock products weighted as follows: 100 pounds milk, .0236; 100 dozen eggs, .54; 100 pounds chickens (live weight), .359; 100 head broilers, .86; 100 head turkeys, 5.1; 100 pounds live hogs, .318; 100 pounds (live weight) cattle and calves, .157; 1 head sheep and lambs on farms January 1, .027; and 1 head work stock January 1, 1.11. Factors taken from U.S. Dept. Agr. Cir. 670, Feed Consumption by Livestock, 1910-41, by R. D. Jennings.

Livestock Production Units are computed in this table to show the combined production of livestock and livestock products by calendar years weighted on the basis of the average quantity of feed concentrates required to produce these products. The livestock production unit is equivalent to 4,237 pounds of milk or about the long-time average quantity produced per milk cow per year. The production of other livestock products when multiplied by the factors listed above are converted to equivalent production units. These units are not interchangeable with grain-consuming animal units, since the latter are based on livestock numbers January 1.

FERTILIZER

Fertilizer and lime for pasture and feed crops.

The important question of feed supply confronts nearly every dairy farmer as he plans all-out production to meet the heavy wartime demands for milk and its products. And all dairymen, whether or not they worry about availability of feed, are searching for ways and means of reducing the cost of their feed.

Here is a valuable suggestion: Look into the possibilities of increasing the yield and improving the quality of your hay and pasture through the use of fertilizer and lime.

Thousands of farmers have increased their feed supply and added extra dollars to their income during recent years by means of these simple soil-building practices.

Actual tests throughout the country have demonstrated that the application of fertilizers where needed will increase yields of hay by 50 to 600 percent and of pasture, 60 to 700 percent, depending upon local conditions. The average gain in yields for both hay and pasture has been more than 75 percent. Thus, proper use of fertilizers and lime usually is equivalent to making nearly 2 acres of feed grow where only one grew before.

Furthermore, experiments show that the protein content of hay can be increased by an average of 20 percent through the use of fertilizers and lime. Every dairy farmer should be sure that he is fully enlisting the aid of these two important materials on his land.

For the past 8 years, the Agricultural Conservation Program has been providing assistance to farmers so they can apply fertilizers and lime on grass and legume crops at minimum cost. More than 5 million tons of superphosphate and more than 75 million tons of lime have been applied under this program.

The 1944 ACP is emphasizing the soil-building practices in keeping with wartime urgency. It is especially designed to assist dairymen get more and better feed. Payments are offered for (1) the application of limestone; (2) the application of phosphate fertilizers; (3) reseeding pastures in some areas; and (4) mowing pastures.

You can get information on how this program can help you by consulting your county Agricultural Conservation committee or county agent.

Shortages of labor, transportation, and storage facilities affecting fertilizer and lime make it imperative that farmers act early in ordering their 1944 supplies. Acceptance of early delivery will prevent any breakdown of the distribution later. In addition, best results are obtained from early application of the materials.

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You can help your feeding problem. Do it now!

The 1944 fertilizer outlook.

In setting for themselves a milk production goal of more than 121 billion pounds in 1944, dairy farmers assumed a man-sized job. The goal is 2 percent above last year's all-time record production. Meeting it will be complicated by problems of manpower and transportation to market, and some problems of equipment and a tight feed situation.

One means of overcoming the feed question lies in the use of adequate fertilizers for the maintenance of pastures and improvement of hay crops. For example, by judicious use of fertilizer, particularly nitrogen, it is possible to gain from 10 days to 2 weeks additional grazing in the early Spring.

Fortunately the fertilizer outlook for 1944 is good. There will be more fertilizer available than in 1943 and farmers are urged to get their orders in early to facilitate its manufacture, transportation and storage. This is because there are manpower bottlenecks in manufacturing, distributing, and storing fertilizers. If farmers will order early, accept delivery early, and store the fertilizer on their own places until time for use, they can materially ease the peak-loads in all three phases.

For the 12 months ending July 1, 1943, farmers used about 10.5 million tons of chemical fertilizers. About 10 percent more is expected to be available for the 1943-44 crop season, but this does not mean greater supplies of every kind of fertilizer. There will be about 40 percent more chemical nitrogen, 15 percent more superphosphate, but there will be less potash.

The supply of natural organic nitrogen probably will be the smallest in many years. This is due to the consumption of virtually all edible organic waste materials as livestock feed. However, the reduced percentage of organics in mixed fertilizers is not expected to affect crop production materially, since more nitrogen can be obtained by using ammonium nitrate and other materials. Ammonium nitrate, one of the new materials being made available for fertilizer, contains from 32 to 34 percent nitrogen, which is about twice the nitrogen content of nitrate of soda. In its concentrated form, it hasn't been used extensively for top and side dressing. Although considerable progress has been made in conditioning the material, its usability after long periods of storage is still uncertain. This is especially true under conditions of high temperature and high humidity. Because of its concentrated form, farmers should follow closely the recommendations of local agricultural authorities as to rate of application and handling methods.

Fertilizers are distributed by the manufacturers to farmers under direction of the War Food Administration. The WFA regulations cover the distribution of all fertilizers containing nitrogen, phosphoric acid, and potash.

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Principal provisions in the regulations are:

1. Establishment of an approved list of fertilizer grades for each State. The lists are designed to make the best use of available materials, labor and transportation facilities.
2. Quantities of fertilizer are made available on the basis of a farmer's crop requirements. Eligibility provisions have been loosened so that growers who have never used fertilizer on hay and pasture crops can obtain supplies for 1944.
3. Farmers should file their applications for fertilizers with their local dealers.

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THE SEED SITUATION AS IT RELATES TO DAIRYING

Production of the six principal grass and clover seeds was about 405 million pounds, the lowest since 1937, but much above all earlier years except 1935. Supplies are not critically short, but some substitutions may be necessary. The 1943 crops of alfalfa seed and red clover seed were larger than in 1942, while alsike clover, sweetclover, lespedeza, and timothy were smaller. The sweetclover seed crop was particularly small as compared to recent years.

Production of clover and grass seed fluctuates greatly, dependent upon the weather at blossomtime, but is affected also by relative needs for hay and by relative prices. Because of restricted imports, increased domestic needs, and demand for export under Lend-Lease, prices of these crops have been relatively favorable, and the acreage saved for seed has been relatively high in recent years. The tremendous expansion in lespedeza seed has been largely responsible for this high level. In 1943 the season for setting seed was not favorable and yields were relatively low.

Despite the fact that alfalfa, clover, lespedeza, and timothy acreage for seed production in 1943 had to compete more than ever before with acreage for grain, hay, and pasturage to meet the greatly enlarged war-time needs for food and feed, total acreage of these seeds in 1943 exceeded that of 1942 by 7 percent and was 8 percent larger than the 10-year (1932-41) average. This increase, although far short of production goals, is attributed to a number of factors such as the price-support program for these seeds, practice payments for producing seeds, excellent weather for harvesting and threshing, and the fact that less labor is required to harvest a seed crop than a hay crop.

Unfortunately, 1943 was not such a good year for the setting of seed, and it was very dry during the summer, with the result that yields per acre of most seeds fell below those of 1942 and also below average. Another factor affecting yields was that relatively high prices (about 75 percent above the 10-year average) made it practical to harvest seed crops from many fields that otherwise might not have been harvested for seed. Because of the reduction in yields, the total production of these seeds in 1943 is 3 percent smaller than in 1942, but 6 percent larger than the 10-year average, which includes several years when lespedeza seed was far less important than in recent years.

Quality of most 1943 seed crops is fairly good, and is somewhat better than that of 1942. This is attributed largely to the fine weather at harvesting and threshing time, in sharp contrast with rainy weather in the late summer and fall of 1942 and frosts that damaged much seed, particularly alfalfa and lespedeza.

More detailed statements regarding the seeds of some of the principal hay and pasture crops used by dairy cattle follow:

Alfalfa seed.

Production of alfalfa seed in 1943, estimated at 1,114,900 bushels (66,894,000 pounds) of thresher-run seed, is 15 percent larger than the 1942 crop of 966,900 bushels (58,014,000 pounds) but 3 percent below the 10-year (1932-41) average of 1,147,780 bushels (68,866,800 pounds). The expected increase this year over last is attributed to the larger acreage as the indicated yield per acre is practically the same as last year. The larger production forecast in 11 States -- Minnesota, North Dakota, South Dakota, Idaho, Wyoming, Nebraska, Kansas, Oklahoma, Montana, Colorado, and Utah -- more than offsets the smaller crops in the 11 other States of Ohio, Indiana, Michigan, Wisconsin, Iowa, Texas, New Mexico, Arizona, Washington, Oregon, and California, although stocks of the Northern hardy type are in short supply.

Supply (production plus farm and dealer carry-overs plus expected imports) of clean seed at this time, totaling 65,033,000 pounds are 3 percent larger than the 1942 supplies of 63,034,200 pounds, but 19 percent smaller than the 1941 supplies of 78,232,000 pounds.

Red clover seed.

Production of red clover seed this year, including medium (June or double-cut) and mammoth (sapling or single-cut), forecast at 1,142,900 bushels (66,857,000 pounds) of thresher-run seed, is 11 percent larger than the 1942 crop of 1,026,100 bushels (61,566,000 pounds) and 6 percent smaller than the 10-year (1932-41) average of 1,218,250 bushels (73,095,000 pounds). Larger crops this year than last are expected in 10 States -- New York, Pennsylvania, Indiana, Michigan, Wisconsin, Minnesota, Maryland, Virginia, Missouri, and Kansas. But smaller crops are expected in 7 other States -- Ohio, Illinois, Iowa, Kentucky, Washington, Idaho and Oregon.

Increased production this year is attributed to an estimated 15 percent expansion in acreage, which was offset in small part by a slightly smaller yield per acre. This year's yield per acre is forecast at .89 bushel (55.8 pounds), compared with .92 bushel (53.4 pounds) and the 10-year average yield of 1.16 bushels (69.6 pounds).

Supplies (production plus farm and dealer carry-overs) of clean seed at this time, totaling 79,326,000 pounds, are 12 percent smaller than the 1942 supplies of 89,960,200 pounds and about 26 percent smaller than the 1941 supplies of 113,718,000 pounds, and in the light of total requirements are below needs.

Alsike clover seed.

Despite the indicated decrease from last year in the acreage of alsike clover seed harvested for seed in 7 out of 11 producing States and lower yields per acre in a majority of these States, production this year is expected to be only 5 percent below last year's small crop, but about 25 percent under the 10-year (1932-41) average. The 1943 crop is

estimated at 238,900 bushels (14,334,000 pounds) of thresher-run seed, compared with 252,400 bushels (15,144,000 pounds) in 1942 and the average of 318,730 bushels (19,123,800 pounds). It is the smallest crop since 1937 and may even fall below that crop (223,800 bushels) if the acreage harvested or the yields turn out smaller than expected.

The number (101,400) of acres for harvest this year exceeds by 14 percent the 89,200 acres harvested last year, but is only 67 percent of the 10-year (1932-41) average of 150,790 acres. Yields per acre estimated at 2.36 bushels (158 pounds) of thresher-run seed, is 17 percent below the record - 2.83-bushel (170 pounds) yield in 1942, and 7 percent below the 10-year average yield of 2.16 bushels (130 pounds).

Supplies (production plus farm and dealer carry-over and imports) of clean seed at this time, totaling 16,152,000 pounds, are about 10 percent smaller than the estimated 1942 supplies of 17,803,000 pounds, and 25 percent below the 5-year (1937-41) average of 21,493,000 pounds.

Sweetclover seed.

Production of sweetclover seed this year, estimated at 457,900 bushels (27,474,000 pounds) of thresher run seed, is the smallest crop since 1922, when 413,200 bushels (24,792,000 pounds) were produced. The decrease is attributed to a sharp reduction in acreage harvested and to a slightly smaller yield. This year's crop is 27 percent smaller than the 1942 production of 625,300 bushels (37,518,000 pounds) and only about half the 10-year (1932-41) average of 908,640 bushels (54,518,400 pounds). Production is expected to be smaller this year than last in 10-States -- Ohio, Indiana, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Wyoming, and Colorado. But a larger crop than last year is forecast for Illinois, Missouri, North Dakota, South Dakota, and Montana.

It is estimated that there were 173,400 acres cut for seed this year, compared with 221,300 acres in 1942 and the 10-year average of 334,880 acres. The largest decreases in acreage occurred in Ohio, Indiana, and Minnesota. They were offset only in part by increases in the Dakotas, Montana, and Illinois. Much sweetclover was plowed under to make additional land available for more profitable crops. Furthermore many acres that normally would have been cut for seed were pastured or cut for hay because of the increased need for forage. Yield per acre of 2.56 bushels (160 pounds) forecast for this year compares with 2.86 bushels (172 pounds) in 1942 and the 10-year average of 2.81 bushels (169 pounds).

Supplies (production plus farm and dealer carry-overs) of clean sweetclover seed at this time, totaling 33,882,000 pounds, are 22 percent smaller than the estimated 1942 supplies of 43,277,100 pounds and 37 percent below the 1941 supplies of 50,564,000 pounds.

Lespedeza seed.

Production of lespedeza seed, estimated at 159,920,000 pounds of thresher-run seed, is 6 percent smaller than the 1942 crop of 170,500,000 pounds but 67 percent larger than the 10-year (1932-41) average of

95,564,000 pounds. The expected decline from last year is attributed to an 9-percent reduction in yield per acre, which more than offsets the 3 percent larger acreage. Production of lespedeza seed is smaller this year than last in southern and eastern producing areas, with the exception of Georgia, where decreases outweigh the larger production in the northern areas. Fewer acres than last year are expected to be harvested in Arkansas, Alabama, Virginia, Mississippi, Tennessee, Louisiana, North Carolina, and Kentucky. On the other hand, more acres are indicated in Illinois, Missouri, Indiana, Kansas, Georgia, and South Carolina.

Drought during the summer and fall was chiefly responsible for the reduction in yield per acre in most States. Growth was so short that combining was difficult. Only in Missouri and Illinois are larger yields per acre indicated, although yield in Alabama may equal that of 1942.

Clean-seed supplies for 1943, approximately equal to requirements, are expected to be 138,389,000 pounds, compared with 155,044,000 pounds for 1942.

Bromegrass seed.

Production of bromegrass seed this year, forecast at 6,885,000 pounds of clean seed, is 23 percent smaller than the 1942 crop of 8,902,000 pounds. Smaller crops in the Dakotas, Nebraska, Kansas, and Montana more than offset the larger crops in Michigan and Idaho.

Decline in production in the United States is attributed chiefly to the reduction of 19 percent in acreage. It is estimated that, beginning the latter part of July, 38,800 acres were harvested for seed, compared with 47,700 acres in 1942. Yield per acre this year is expected to be about 177 pounds of clean seed, which is only 5 percent less than the 1942 yield of 186 pounds.

Stocks of old bromegrass seed held by dealers on June 30, totaled 4,147,000 pounds this year, 2,159,000 in 1942, 219,000 in 1941, and 662,000 in 1940. Imports in 1943 are expected to offset the decrease in production.

Crested wheatgrass seed.

With an acreage less than half that of 1942 and a yield per acre nearly one-third lighter, production of crested wheatgrass seed is forecast at 3,883,000 pounds of clean seed, compared with 12,008,000 pounds last year. Smaller crops are indicated for all States except Idaho, where the crop is unchanged from last year.

The sharp reduction in acreage this year resulted from a number of factors such as: Plowing up of crested wheatgrass to make more acres available for grain, need for increased amount of forage, shortage of labor, and less demand and relatively low prices for seed in 1942.

Acreage harvested for seed is forecast at 41,300 acres, compared with 91,300 in 1942. The expected yield of 90 pounds per acre compares

with about 132 pounds in 1942. Carry-over of this seed by dealers on June 30 was 862,000 pounds this year, 987,000 in 1942, 523,000 in 1941, and 94,000 in 1940. Anticipated 1943-44 imports will make some of the deficit caused by the decrease in production.

Timothy seed.

Production of timothy seed this year, estimated at 1,499,600 bushels (63,068,000 pounds) of thresher-run seed, is 11 percent smaller than the 1942 crop of 1,678,500 bushels (75,848,000 pounds) and 6 percent below the 10-year (1932-41) average of 1,601,180 bushels (71,387,000 pounds). A smaller crop this year than last is expected in all principal producing States, except Indiana where production for the 2 years is indicated to be the same.

The decrease in production this year is attributed chiefly to a 10-percent reduction in acreage. The number of acres harvested for seed this year is estimated at 394,000, compared with 437,400 acres in 1942.

The acreage of clover-timothy hay for harvest this year, estimated at 19,846,000 acres, is 319,000 acres larger than the 19,527,000 acres harvested last year, while the acreage of timothy harvested for seed was 57,900 acres smaller than in 1942. This suggests that some of the increase in acreage for hay was at the expense of acreage for timothy seed, particularly because all the important timothy-seed producing States, except Iowa, indicated that harvested acreages of clover-timothy hay this year were as large as or larger than last year.

Supplies (production plus farm and dealer carry-overs) of clean seed at this time, totaling approximately 95,847,000 pounds, are about 13 percent larger than the 1942 estimated supplies of 84,841,000 pounds, but about 9 percent below the 5-year (1937-41) average of about 104,973,000 pounds (2,332,733 bushels) of clean seed. Present supplies are abundant in relation to total requirements.

Sudan grass seed.

Sudan grass seed production this year, forecast at 35,000,000 pounds of thresher-run seed, is the smallest since 1936 and compares with 40,440,000 pounds in 1942 and the 10-year (1932-41) average of 55,780,000 pounds. The 13-percent decrease in production is attributed to the smaller acreage, as yield per acre was a little larger this year than last. Smaller crops in Oklahoma, Texas, and New Mexico more than offset larger crops in Nebraska, Kansas, Colorado, Oregon, and California.

Acreage this year, estimated at 89,000, is 12 percent below that of 1942 (100,800 acres) and a little more than half the 10-year average of 157,653 acres. Sharp decreases in Oklahoma, Texas, and New Mexico because of the severe drought, were greater than increases in acreage in five other producing States. Yield per acre is expected to be 393 pounds of thresher-run seed, compared with 401 pounds in 1942 and the 10-year average of 347.2 pounds.

Supplies (production plus farm and dealer carry-overs) of clean seed at this time, totaling 38,810,000 pounds, are 38 percent smaller than the 1942 supplies of 62,952,000 pounds and 62 percent smaller than the 1941 supplies of 102,354,000 pounds.

FARM MACHINERY AND SUPPLIES

Farm Machinery.

The outlook for new farm machinery is greatly improved over 1943. Over-all raw materials authorized by the War Production Board for making general planting, tillage, and harvesting equipment during the year provide for approximately double the quantity produced in 1943, or about 80 percent of the production in 1940 - a year in which manufacture was relatively large. Furthermore, the manufacture of repair parts will be unrestricted.

Production for the first quarter (July 1 to September 30, 1943) of the 1943-44 program of spring-use equipment, including land-preparation machinery, seeding equipment, tillage tools and similar items, amounted to 760,500 units.

Total tractor production for farm use during the 4 months ending October 31 was slightly more than 25 percent of the year's production schedule. Component parts, such as antifriction bearings, malleable castings and forgings constitute the principal problem in connection with the production of farm machinery. WFA has been assured by the War Production Board that every step possible, consistent with critical military requirements, will be taken to expedite delivery of component parts. The principal bottleneck in farm machinery production is in bearings, one of the trouble spots of all mechanical production.

Production is accelerating and, barring unforeseen difficulties, it is anticipated that quotas assigned to manufacturers will be met. It is expected that equipment items needed for spring tillage will be delivered in time to meet farmer's needs.

Officials of both WPB and WFA are cooperating to assist farm machinery and equipment manufacturers to keep substantially on their schedules as approved by WPB. The schedules give consideration to farmers' seasonal needs. It must be borne in mind, however, that there will be tight spots on some types of machinery. Production of the different implement items, for example, may vary from 50 to 150 percent or more of 1940 production.

The improved outlook for 1944 permits a reduction in the number of types of machinery which it will be necessary to ration, compared with the rationing schedules of 1943. Distribution control will be necessary on only 46 types, and rationing control on only 31 types. More nearly normal trade relationships will exist between farmers, dealers, and manufacturers.

Machinery rationing for 1944 continues under FPO No. 14 and supplements. The new program permits manufacturers greater latitude in

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distribution than was possible in 1943. Neither attachments nor repair parts are subject to rationing and distribution.

A tight spot in dairy equipment next year will be hauling vehicles, including trucks and replacement tires for trucks now in operation. Allied military operations require the lion's share of newly made hauling vehicles. When fighters land on foreign shores, or invade enemy territory, they must take their transportation with them. Consequently, on the home front, it is imperative that farmers maintain trucks, tires, and other hauling equipment now in use. It will be necessary to keep every farm and dairy truck operating and used to the fullest extent. Motors must be kept in condition and tires must be recapped. The synthetic rubber production program has been accomplished but the tire shortage is still with civilians. Here again military needs come first.

In addition to maintenance, farmers should pool their rolling stock. Their magnificent success in pooling farm machinery in 1943 suggests a partial solution of the farm to market hauling problem in 1944.

Manufacture of new trucks for farm use in 1944 does not promise to solve transportation shortages. Although truck production for civilian use in 1944 is scheduled at four times that of 1943, it will be also only a small part of a normal year's production for civilian needs. Furthermore, the relatively low production planned next year must be divided among farmers and several other civilian claimant groups.

The seriousness of the tire situation - the extent of our current starvation diet on tires - may be seen in figures from the Office of the Rubber Director. By the end of 1943 there will have been distributed during that year a total of 17,200,000 tires of passenger car size. But--because this figure includes synthetic tires, war tires made of reclaimed rubber, used tires recovered from last year's collection, and other emergency tires--the total is the equivalent in service to only about 12,000,000 new tires. This compares with approximately 50,000,000 tires a year prior to the war.

Milking machines and miscellaneous equipment.

More steel for food processing has been allocated for the coming year. Production schedules for dairy machinery are 114 percent of 1939 production.

Because milking machines are vital in saving labor, planned production in 1944 is 44,000 units. This is 140 percent of 1940 production. It is hoped that a substantial increase may be authorized for 1945. Rubber inflators (teat cups) for new and used machines present a problem. Normally, crude rubber is used in making them. Use of inflators made of synthetic rubber is being studied with the hope that a satisfactory product can be developed and used without damage to the milk production program.

Manufacture of general dairy, poultry, barnyard, and miscellaneous equipment has been authorized to meet minimum requirements in 1944. Some equipment is being made of materials other than steel (or other

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traditional materials). Here again availability of materials and manpower frequently complicate matters. For example, there is authorized sufficient material for manufacture of 122 percent of 1940 production of dairy pails. The problem is one of production, specifically use of a solder that slows operations, but manufacturers believe they have the problem solved so that their quotas will be met.

So far as water supply equipment on farms is concerned, WFA has attempted to obtain all materials and supplies wherever watering livestock was concerned. This policy will be continued. With bottlenecks on labor, transportation, and materials, no surplus of this type of equipment can be anticipated. The quantity on schedule for 1944 should be enough to meet genuine needs of farmers.

Probably as much, or a little more, field fencing will be available to farmers in 1944 as they had in 1941. Barbed-wire production is expected to be near normal levels.

The amount of lumber available in 1944 is expected to be about the same as in 1943. There is a shortage of all kinds of forest products and it is hoped that the farm lumber production program recently initiated by the Government will relieve the situation to some extent. Use of lumber on farms should be confined, in so far as possible, to essential maintenance and repair of buildings and structures. Some new construction and repair work can be done with non-critical materials--masonry, brick, stone, etc. This phase is being emphasized jointly by Government and the building materials industries concerned.

Lumber and steel are not available for construction of silos but manufacturers of masonry materials that can be used for this purpose will be allowed a 60 percent increase in their base production.

The supply of hand tools--forks, hoes, rakes, shovels, axes, scythes, hammers, sledges, etc.--will probably be relatively plentiful.

Gasoline and other fuel.

Farmers are essential users of gasoline, kerosene, fuel oil and other petroleum products, and as such are given preference for delivery of these items for food production and transportation purposes. However, supplies of petroleum products are short, are measured against heavy military and other essential civilian demands, and farmers should be urged to practice conservation in their use.

Packaging supplies.

Packaging and container materials are in short supply and not too much relief can be expected. Consequently, bags, crates, boxes and other types of containers should be conserved and saved for re-use wherever possible.

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Sprays, repellants, disinfectants and cleaners.

Dairy disinfectants and cleaners will be available in about the same quantity as in 1943, that is, the supply will be generally adequate. Dairymen should use them wisely but liberally enough to accomplish the intended purposes. One cleanser-the new soapless cleanser-will not be as readily available as had been hoped. It is especially desirable as a time-saver in washing dairy utensils.

Cattle fly sprays and repellents, as well as dairy and household type sprays, will be available in usual, adequate quantities. Where pyrethrum normally has been used in some of them, synthetic compounds will be used in 1944. Efforts are being made to have these sprays available in somewhat greater quantities--to keep pace with the expansion in dairy herds.

LABOR

Dairy farming is a 365-days-a-year business. It is a business that requires a high degree of skill on the part of both the operator and those who help him. The Government fully realizes the importance of keeping skilled workers on the farm to assure maximum production of war-vital food, feed, and fiber.

The Tydings Amendment to the Selective Service Act provides that every Selective Service registrant found by a local board (subject to the right of appeal) to be "necessary to and regularly engaged in an agricultural occupation or endeavor essential to the war effort shall be deferred from training and service in the land and naval forces so long as he remains so employed and until such time as satisfactory replacement can be obtained."

As of September 1943 Selective Service reports that over 1-1/2 million farm men under 38 have been deferred and classified 2-C and 3-C. Except for occupational deferment, probably about half of that number would have been drafted or would now be liable for induction. Selective Service is interested in seeing that farm boys who are deferred warrant that deferment, and does not anticipate many new classifications for farm deferment, with the exception of those now in 3-A who are farm boys. They will be re-classified as 3-C.

Under Public Law 45, approved by the President on April 29, 1943, a comprehensive farm labor program embracing the entire Nation has come into being. The Office of Labor of the War Food Administration and the State extension services are charged with the responsibility of meeting the need for farm workers. The number of placements of workers on farms during the 6 months ending October 31, 1943 (including placements made by the U. S. Employment Service under contract with the extension services), totaled approximately 3,478,000. Of these placements approximately 146,000 were of year-round workers.

To meet farm labor needs fully under wartime conditions, it is necessary to draw on sources of labor that would not ordinarily be used. Farming, like industry, is using women workers in increasing numbers. And it is likewise making greater use of teen-age boys and girls. Foreign workers, Japanese evacuees, war prisoners, and conscientious objectors are also being used to help meet farm labor needs. As a last resort in meeting local emergency farm labor shortages, troops have been used to avert crop losses.

In addition to efforts being made to recruit additional necessary farm labor, the Extension Service, through its subject-matter specialists and county agricultural agents, special labor assistants, and volunteer neighborhood leaders, is assisting farmers in training new workers, in simplifying farm jobs, saving labor through better management on the farm, and in the exchanging of local labor and the sharing of equipment.

FARM TRANSPORTATION IN 1944

Hauling vehicles.

Next year - 1944 - is going to be a critical year in movement of farm products to market. The general farm equipment picture looks decidedly better in 1944 - raw materials having been allocated to produce about twice the quantity manufactured for 1943 - but the farm and over-the-road trucks that thread their way over countless country roads and main thoroughfares face a crisis next year. Obvious reasons is that allied military operations require the lion's share of newlymade hauling vehicles of all kinds. There is no alternative to meeting that demand, because when fighters land on a foreign shore they must take their transportation with them. In addition our allies, especially Russia, depend primarily on us for their transport vehicles.

What are the alternatives on the farms at home?

First, rigid maintenance. It is imperative that every farm truck, every truck that hauls for hire, be kept operating and used to the fullest extent possible. Motors must be kept in condition and tires will have to be reconditioned - because there isn't one to spare. When maintenance is no longer practical, then the alternative we must consider is that farmers will be expected to pool their rolling stock. They did a magnificent job of voluntarily pooling farm machinery in 1943, an experience that will be helpful in pooling the trucks that haul the foods and fibers to market.

A third factor that will alleviate the transportation strain only slightly is new equipment. There are enough heavy trucks, especially in the heavier classes, already authorized and in production for civilian use to provide a fairly high replacement ratio, but few of these will be delivered this year (1943) and only 1,500 of the heavy-heavy trucks are scheduled for delivery in each of the first and second quarters (1944) and 2,734 for each of the third and fourth quarters. The light-heavy trucks offer a much more serious problem with only 500 scheduled for delivery in the first quarter and 1,000 in the second quarter. The third and fourth quarter production is much better, provided axle and transmission facilities can be expanded sufficiently to meet the schedule of 6,424 for each of the third and fourth quarters. Medium trucks offer a serious problem with the production schedule as follows: First quarter, 6,250; second quarter, 12,062; third quarter, 20,118; and fourth quarter, 20,120. The aforementioned trucks are scheduled for manufacture. Their production will be consolidated with that of the military truck program and the Army will expedite their delivery the same as they expedite their own program.

The foregoing schedule of planned production totals about 81,000 trucks for civilian use and represents a "must" program of medium and heavy truck construction for 1944. It is dependent upon expansion of

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production facilities to produce critical assemblies and components. It likewise depends upon the assembly and training to "man" these expanded facilities. Should the entire program be fulfilled in 1944, it is extremely doubtful if agriculture would get in excess of 25,000 to 35,000. This represents roughly less than 20 percent of the anticipated needs of agriculture. No light trucks (1/2-ton, 3/4-ton, and 1-ton) are now scheduled for production, and agriculture's needs for this type of vehicle for service operations on the farm are heavy. The War Food Administration is emphasizing the necessity for making vehicles of this weight.

Actually, there are less than 15,000 trucks in the civilian stock pile remaining for all civilian purposes and only about 50,000 passenger cars. The combined truck program is a No. 2 "must" program on the War Production Board's critical list, aircraft being first. The full resources of the Government are being mobilized to see that the above production schedules are met.

There is a fourth possibility which can, and probably will, be a large factor in moving products from farms next year. That's the American farmers' ingenuity. He may be forced to rig up a trailer, pulling it behind his tractor, his truck, or even the family passenger car. The family car itself will, no doubt, haul considerable amounts. Pick-ups, station wagons, any conceivable vehicle that can help move stuff rapidly will be put to use. There simply is no other way, according to the men in ODT, WPB, and WFA whose job it is to wrestle with this almost impossible transportation dilemma.

Component parts for making these new trucks are the most serious problem confronting war programs today. Transmissions, axles, bearings, magnetos, brake shoes, springs, carburetors, these and hundreds of others are often made in scattered plants, finally being assembled in the finished trucks. These items -- as spare parts -- go along with each military vehicle, thus aggravating the job of assembling finished trucks for civilian uses. And, in the factories where such parts are made, manpower pinches production schedules.

Under the circumstances, trucks have two high-priority destinations -- the military operations and the movement of foods and farm crops. Always the military comes first. Wholesale food distribution has received about one-fifth of the number of trucks allocated to agriculture. This is in addition to farm trucks and the trucks allocated for agricultural service such as hauling milk, hogs, cattle, and other farm products.

At present about 35 percent of the trucks allocated for civilian use and about 13 percent of passenger cars are going to agriculture. How thin this stream is can be seen by comparison with 1941, when more than 194,000 farmers bought trucks, new and used. In the 6 years 1936-41, we built an average of 750,000 trucks a year, including export vehicles. We're building many more than that now, but mostly for military operations all over the world. Every new area in which our troops land means more transportation requirements, from Alaska to the South Seas; from Panama to the Russian front.

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The trucking situation may be particularly critical for the dairy industry, which depends so much on rubber-equipped vehicles. Every farmer, milk-plant operator, and hauler of dairy products should get so organized that, if he has a temporary breakdown with his own vehicles, he will not be left stranded. Wherever possible, pooling arrangements should be made, particularly during the flush spring season.

Recent surveys indicate that the dairy industry needs around 25,000 new trucks. That figure contrasts with the 25,000 to 35,000 new trucks that presumably will be available for all strictly agricultural hauling, if the production program in 1944 is fulfilled. By the latter part of the year, assuming the truck production program progresses satisfactorily, the situation may look somewhat brighter. In the meantime, however, dairy products will have to be moved, for the most part, on the vehicles now in service.

Rubber tires.

On the Nation's farms there are -

1,100,000 trucks.
4,250,000 automobiles
1,500,000 trailers.
1,600,000 tractors.
3 to 3½ million wagons.

Those vehicles and machines, along with other pieces of equipment, constitute the main portion of agriculture's fleet of rubber-using vehicles. Providing the necessary rubber to keep them rolling -- to keep farm products and farm supplies moving -- will be another tight spot in farm transportation in 1944. After having been on a tire ration program for 2 years since Pearl Harbor, we go into the year under the necessity of continuing chiefly on a maintenance basis, for the third consecutive year.

A year prior to the war, there were distributed in the United States approximately 50 million tires of passenger-car sizes. In 1943, after 2 years of rationing, there will have been distributed approximately 17,200,000 tires of passenger-car sizes. These tires, however, will be the equivalent in service to only about 12,000,000 new tires, according to the Rubber Director of WPB. The reason for this is that the passenger-car tires sold in 1943 were largely new synthetic tires, war tires made of reclaimed rubber, used tires, and emergency tires, hence unequal in service to those made before Pearl Harbor.

Truck and bus tires are one of the serious problems facing this country. Overloading and, in many cases, higher-than recommended speeds already have taken a serious toll of these tires. New tires cannot be produced in sufficient quantity in the immediate future to prevent an extension of the present shortage. The requirements of the armed forces absorb the first and largest percentage of new production. It is not the supply of synthetic rubber that will limit the making of the large sizes of tires, but the shortage of manpower, the shortage of high-tensile rayon cord, and the current lack of adequate facilities in the industry,

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i.e. mills, calenders, tire-building equipment, vulcanizers, and special large-sized molds. Today, the industry is making many of these large tires from the same materials it always has used, and will so do until more rayon is available.

To bridge the crisis in domestic transportation which this situation implies and keep their industry in operation, the truck and bus industry must cooperate as never before. Overloading and speeding, especially on hot pavements, must be eliminated, and every tire carcass that can be saved by recapping must be so preserved. The length of time during which truck and bus operators can successfully do their job will depend upon the care given their tires.

A farmer may establish eligibility for a farm-tractor or farm-implement tire, and also, in view of the shortage of such tires, when farm tractor or implement tires themselves are not available, he may obtain a Grade III passenger tire for the front wheels, or a used truck tire for the rear wheels. There are no restrictions on the recapping of farm-tractor tires.

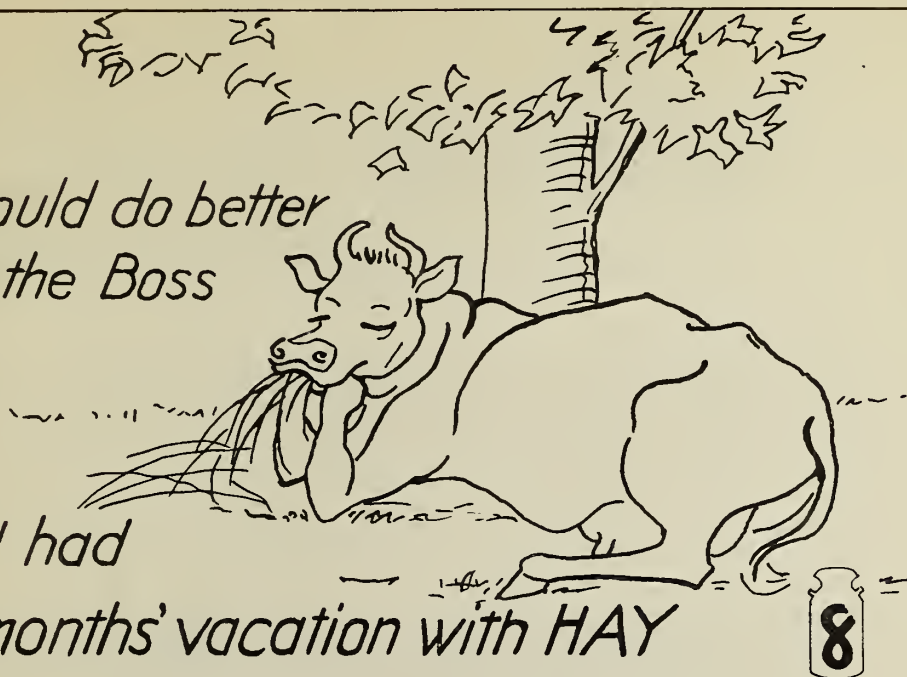
The holder of an "A" gasoline ration book outside the gasoline shortage area is entitled to a used tire only if he can show that part of his driving is occupational. The "B" book holder throughout the country can get a certificate for a used or emergency tire, but no longer can he get a new tire. Only those whose gasoline ration permits them to drive 601 miles or more a month can get new tires. There are no restrictions on passenger-tire recapping.

The next 6 to 9 months will be the most difficult. The effect of a global war, the past 2 years of wear and tear upon existing tires, and the necessity, in order to save crude rubber, of building only military and a few most-essential tires have emphasized the scarcity of tires. The inventories of tires built up in time of peace have now been drawn down to an irreducible minimum; the requirements of the military forces are tremendous and have increased materially, and though new production will increase, it will have to wait for the gradual installation and manning of the expansions of other programs. A shortage of rayon tire cord has required, and continues to require, an excessive use of crude rubber. In the meantime, the greatest conservation must be maintained. For a long time to come, recapped tires must continue to carry much of the transportation burden.

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for the Boss*

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_____	_____	:	_____
_____	_____	:	_____
_____	_____	:	_____
_____	_____	:	_____
_____	_____	:	_____

Continue the good practices of '43 in '44. Adopt the good practices for '44 that you have checked in the right column. More milk for fighters on the home and battle fronts, the dairy farmer's goal for '44.

Tear off here, keep top half, mail bottom half to your county agent.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS U. S. DEPARTMENT OF AGRICULTURE AND STATE LAND-GRANT COLLEGES COOPERATING

Name: _____
Address: _____

Number of cows: _____

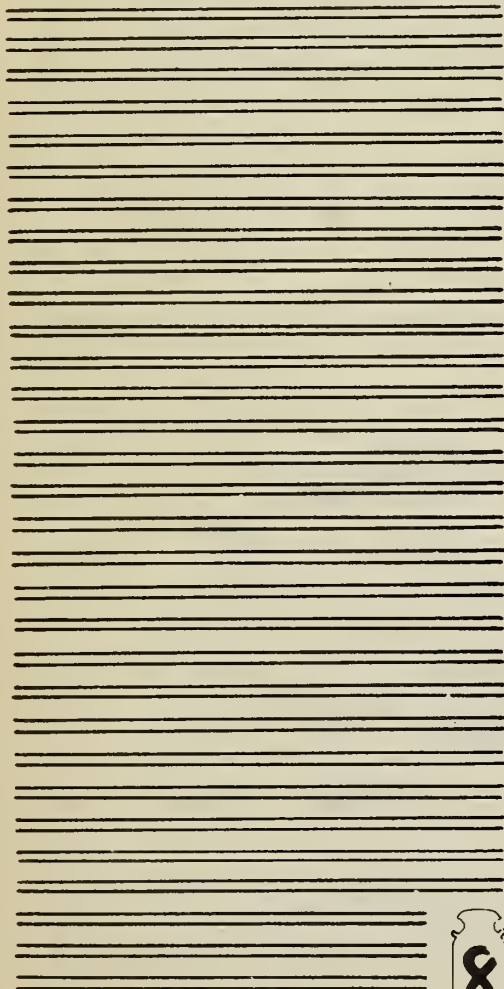
Recommended Practices which support the 8-Point
Milk Production Program

	1943	:	1944
Did you _____	_____	:	_____
in _____	_____	:	_____
1943 _____	_____	:	_____
and _____	_____	:	_____
will you _____	_____	:	_____
in _____	_____	:	_____
1944? _____	_____	:	_____



The main dairy problems I face in 1944 are:

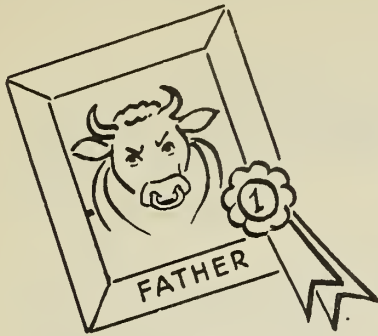
Reverse side of bottom half carries county agent's address, indicia and return card. Perforate at center for easy separation by farmer. Suggest they hang cards up for ready reference and constant suggestion. A hole might be punched in top half.

[illegible]

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. In the bottom-left corner, there is a small, stylized graphic element consisting of a vertical rectangle with rounded ends and a decorative top, containing the number "8". There are also some very faint, small dark spots scattered on the page, likely due to scanning artifacts or minor imperfections on the original paper.

FEED TO AVOID THE SUMMER SLUMP /





Have Better Sires



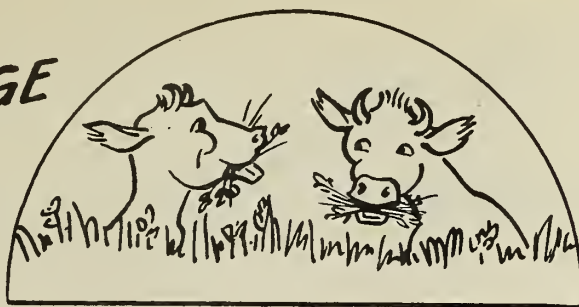


post cards

USDA

LIB

GET MOST
OUT OF FORAGE
SUPPLY

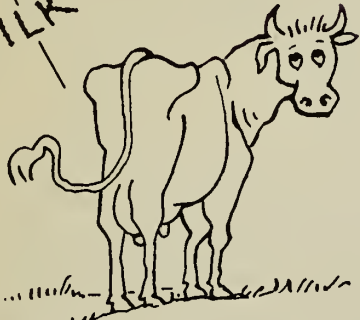




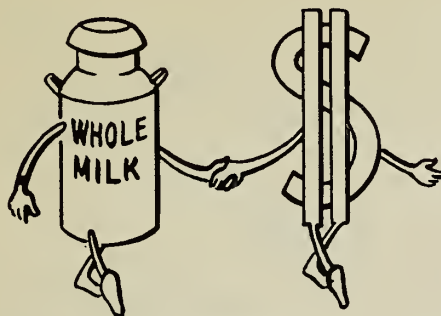
KEEP MILK COOL



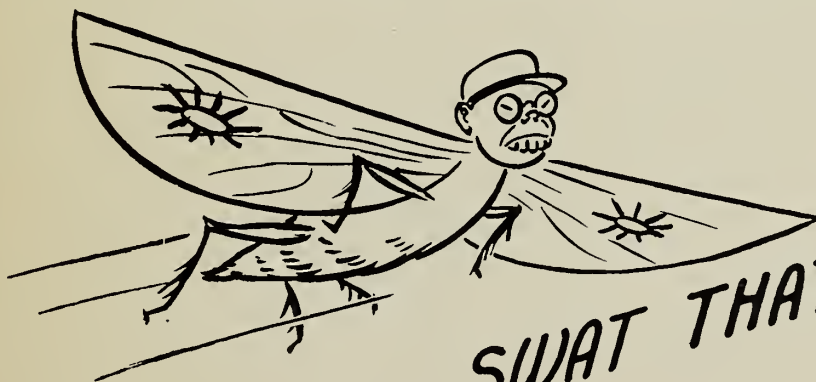


This image shows a single sheet of cream-colored paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. In the bottom-left corner, there is a small, stylized black-and-white icon that resembles a classical building facade or a decorative scrollwork element. The rest of the page is blank, with no handwriting or other markings.[illegible]

envelope stuffers



Whole Milk
Pays Better



SWAT THAT FLY!









envelope stuffers



*Get Most out of
Forage Supply*

Handwriting practice lines for the left page, consisting of multiple horizontal lines. A small icon of a milk can with the number 8 is located at the bottom right of the lines.

Handwriting practice lines for the right page, consisting of multiple horizontal lines. A small icon of a milk can with the number 8 is located at the bottom left of the lines.



Keep Milk Cool





**THIS IS
IMPORTANT
TO BOTH
OF US,
MISTER!**



**POINT MILK PRODUCTION
PROGRAM FOR 1944**

Point I- _____

The OTHER 7 POINTS

2.	_____
3.	_____
4.	_____
5.	_____
6.	_____
7.	_____
8.	_____



SPONSOR

SERIES OF 8 AD MATS FOR LOCAL SPONSORSHIP

USDA
LIB

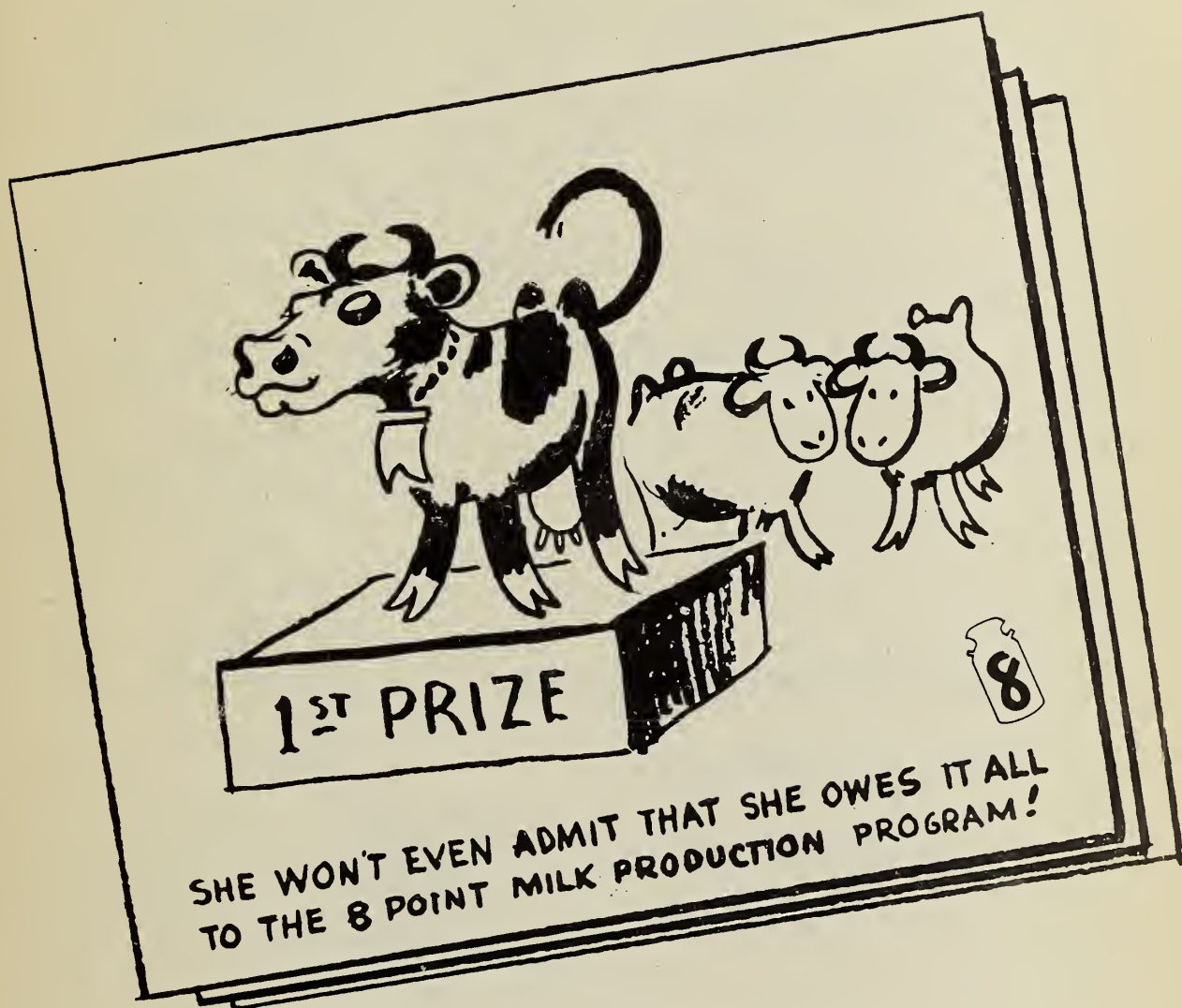
ST. JOHN
THE BAPTIST
CHURCH
1907-08
SESSION

MEMBERSHIP LIST FOR THE
YEAR 1907-08

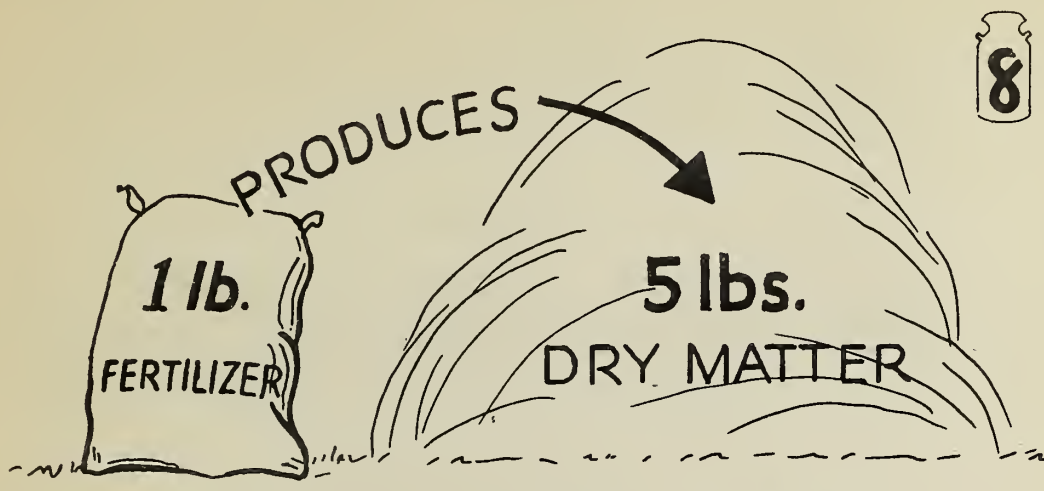
1907

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

MEMBERSHIP LIST




"Feature" cartoon mat series



A diagram illustrating the effect of fertilizer. On the left is a sack labeled "1 lb. FERTILIZER". An arrow labeled "PRODUCES" points from the sack to a large, rounded pile of material on the right labeled "5 lbs. DRY MATTER".

FERTILIZE --
to increase quality and quantity of feed



A cartoon illustration of a cow with a halo, sitting on a cloud and playing a harp. There are small 'x' marks around the cow, suggesting a heavenly or idyllic environment.

Plenty of **PASTURAGE**
SILAGE and **HAY**
is heaven for a cow



post cards

USDA
LIP



